

Attorney Reference No.: 59486.000002  
Group Art Unit: 1655  
Examiner: Dr. Kailash C. Srivastava  
Date of Amendment: May 9, 2007

Application No. 09/853,635  
Filed: May 14, 2001  
Applicant: Bengt Krister OLSON

### **AMENDMENTS TO THE CLAIMS**

This listing of claims will replace all prior versions and listings of claims in the application:

1-103 (canceled).

104. (Previously Presented): A method of increasing collagen synthesis or lessening the decrease in collagen synthesis in the dermis comprising the oral administration to a human of a composition comprising:

- i) at least one glycosaminoglycan found in cartilage enzymatic hydrolysate, or a synthetic form of at least one glycosaminoglycan;
- ii) ii) at least one polyphenolic, hydrophilic antioxidant found in grape seed; or synthetic form of at least one polyphenolic hydrophilic antioxidant and esters thereof; and
- iii) lycopene.

105. (Withdrawn): A method according to claim 104, wherein the at least one polyphenolic, hydrophilic antioxidant is obtained from a grape seed extract.

106. (Previously Presented): A method according to claim 104, wherein said at least one polyphenolic, hydrophilic antioxidant is obtained from at least one natural source.

107. (Withdrawn): A method according to claim 104, wherein said at least one polyphenolic, hydrophilic antioxidant is obtained from a natural source, said natural source selected from the group consisting of pine bark, *Vitis vinifera*, *Camelia sinensis*, *Aesculus hippocastanum*, *Gingko biloba*, *Vaccinium myrtillus*, *Silybum marianum*, and combinations thereof.

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108. (Previously Presented): A method according to claim 104, wherein said at least one polyphenolic, hydrophilic antioxidant comprises an oligomeric procyanidol.

109. (Previously Presented): A method according to claim 104, wherein said lycopene is obtained from a tomato variety.

110. (Previously Presented): A method according to claim 104, wherein said lycopene is obtained from a tomato extract.

111. (Previously Presented): A method according to claim 104, wherein said composition further comprises a carotenoid comprising  $\beta$ -carotene,  $\gamma$ -carotene,  $\delta$ -carotene, zeaxanthin, cryptoxanthine, luteine, xanthophyll, or a combination thereof.

112. (Previously Presented): A method according to claim 104, wherein the composition comprises lycopene in an amount of 0.1 to 5% wt/wt.

113. (Previously Presented): A method according to claim 111, wherein the composition comprises less than 0.025%  $\beta$ -carotene by weight.

114. (Currently Amended): A method according to ~~any one of claims~~ claim 104 and 105, wherein the composition comprises 0.25-15 mg of lycopene and 2.5-100 mg of a grape seed extract.

115. (Currently Amended): A method according to ~~any one of claims~~ claim 104 or 105, 127 and 129 wherein said composition comprises 1-2.5 mg of lycopene, 5-50 mg of grape seed extract and 50-200 mg of cartilage enzymatic hydrolysate.

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116. (Withdrawn): A method of increasing collagen synthesis or lessening the decrease in collagen synthesis in the dermis comprising the oral administration of a composition comprising:

20-40%, weight/weight, cartilage enzymatic hydrolysate comprising glycosaminoglycan;

1-10%, weight/weight, grape seed extract comprising oligomeric procyanidol; and

1-10%, weight/weight, tomato extract comprising lycopene.

117. (Previously Presented): A method according to 104, wherein said composition further comprises *Acerola* extract.

118. (Withdrawn): A method of increasing collagen synthesis or lessening the decrease in collagen synthesis in the dermis comprising the oral administration of a composition comprising:

100-110 mg of shark cartilage enzymatic hydrolysate comprising glycosaminoglycan;

2.5-100 mg of grape seed extract and 0.25-15 mg lycopene;

2.5-35.00 mg of *Acerola* extract;

60-90 mg of microcrystalline cellulose; and

3.5-4.5 mg of silicon dioxide.

119. (Withdrawn): A method of increasing collagen synthesis or lessening the decrease in collagen synthesis in the dermis comprising the oral administration of a composition comprising:

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100-110 mg of shark cartilage enzymatic hydrolysate comprising glycosaminoglycan;  
2.5-100 mg of grape seed extract comprising oligomeric procyanidol; and  
0.25-15 mg lycopene;  
wherein the combined mass of the grape seed extract and the lycopene is 95-105 mg;  
60-65 mg of inulin;  
25-35.00 mg of ascorbic acid;  
10-20 mg of zinc gluconate; and  
10-15 mg of silicon dioxide.

120. (Previously Presented): A method according to claim 114, wherein said composition comprises 0.75-2.5 mg of lycopene and 10-30 mg of grape seed extract.

121. (Withdrawn): A method according to claim 104, wherein said composition is in a form for oral administration comprising tablets, powders, granules, capsules, sachets, solutions, suspensions, tonics or syrups, or a combination thereof.

122. (Withdrawn): A method according to claim 105, wherein the grape seed extract is obtained by using organic solvents.

123. (Withdrawn): A method according to claim 122, wherein said grape seed extract comprises up to 25% w/w of catechin, epicatechin or gallic acid; up to 90% w/w of epicatechin dimer, trimer or tetramer, or gallates thereof, or up to 10% w/w of epicatechin pentamer, hexamer or heptamer, or gallates thereof.

124. (Previously Presented): A method according to claim 104, wherein said glycosaminoglycan is from a cartilage enzymatic hydrolysate obtained by enzymatic proteolytic cleavage of cartilage.

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125. (Previously Presented): A method according to claim 124, wherein said cartilage is selected from the group consisting of bovine cartilage, porcine cartilage, shark cartilage, squid cartilage, chicken cartilage and salmon cartilage.

126. (Previously Presented): A method according to claim 104, wherein said glycosaminoglycan is from a shark cartilage enzymatic hydrolysate obtained by enzymatic proteolytic cleavage of said shark cartilage.

127. (Previously Presented): A method according to any one of claims 104 and 124, wherein said glycosaminoglycan comprises chondroitin ester, a keratan ester, hyaluronic acid or an ester thereof, a dermatan ester, heparin or a heparan ester.

128. (Withdrawn): A method according to any one of claims 104 and 105, wherein the grape seed extract and lycopene are in weight/weight ratio of about 5:1 to 15:1.

129. (Currently Amended): A method according to ~~any one of claim~~[[s]] ~~105 and~~ 124, wherein the cartilage enzymatic hydrolysate and the grape seed extract are present in a weight/weight ratio in the range of from about 5:1 to 15:1.

130. (Currently Amended): A method according to ~~any one of claim~~[[s]] ~~105 and~~ 124, wherein the cartilage enzymatic hydrolysate and grape seed extract are present in a weight/weight ratio of about 1:2 to 2:1.

131. (Previously Presented): A method according to any one of claims 104 and 124, wherein the cartilage hydrolysate and lycopene are present in a weight/weight ratio of about 1:2 to 2:1.

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132. (Withdrawn): A method according to claim 122, wherein the grape seed extract is obtained by using the organic solvents, evaporating the solvents, re-dissolving a residue in water, and filtering and drying a filtrate.

133. (Withdrawn): A method according to claim 122, wherein the organic solvents are selected from the group consisting of acetone, ethyl acetate and mixtures thereof.

134. (Previously Presented): A method according to claim 104, wherein the weight ratio of the at least one polyphenolic, hydrophilic antioxidant to lycopene is about 1:1 to about 200:1, 2:1 to 100:1, 5:1 to 50:1, 5:1 to 20:1, 5:1 to 15:1, 7:1 to 12:1 or about 10:1.

135. (Previously Presented): A method according to claim 104 wherein the weight ratio of the at least one glycosaminoglycan to the at least one polyphenolic, hydrophilic antioxidant is about 1:1 to about 200:1, 2:1 to 100:1, 5:1 to 50:1, 5:1 to 20:1, 5:1 to 15:1, 7:1 to 12:1 or about 10:1.

136. (Previously Presented): A method according to claim 104 wherein the composition consists essentially of:

- i.) at least one glycosaminoglycan found in cartilage enzymatic hydrolysate, or a synthetic form of at least one glycosaminoglycan;
- ii.) at least one polyphenolic, hydrophilic antioxidant found in grape seed; or synthetic form of at least one polyphenolic hydrophilic antioxidant and esters thereof; and
- iii) lycopene.

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137. (Previously Presented): A method according to claim 104 which includes a cosmetic or prophylactic treatment of skin against the signs of skin ageing, and damage resulting from exposure to UV radiation comprising the oral administration of the composition of claim 104.

138. (New): A method according to claim 127, wherein said composition comprises 1-2.5 mg of lycopene, 5-50 mg of grape seed extract and 50-200 mg of cartilage enzymatic hydrolysate.

139. (New): A method according to claim 129, wherein said composition comprises 1-2.5 mg of lycopene, 5-50 mg of grape seed extract and 50-200 mg of cartilage enzymatic hydrolysate.